

CLAIMS

[1] An electromagnetic fuel injection valve, in which a valve member (20) is contained in a valve housing (8) comprising a magnetic cylinder (9) coaxially coupled at a front end thereof to a valve seat member (10) having a valve seat (13), said valve member (20) being spring-biased in a direction in which said valve member (20) is seated on said valve seat (13); a non-magnetic cylinder (26) is coaxially coupled at a front end thereof to a rear end of said magnetic cylinder (9) to surround a portion of a movable core (18) which is coaxially connected to said valve member (20) with a rear end face thereof serving as a movable attraction face (41); and a front portion of a stationary core (22) having a front end face serving as a stationary attraction face (42) is fitted into and fixed in a rear portion 15 of said non-magnetic cylinder (26), so that said stationary attraction face (42) is opposed to said movable attraction face (41), characterized in that the front portion of said stationary core (22) is fitted and fixed in said non-magnetic cylinder (26) so as to be in close contact with an inner surface of an intermediate portion of said non-magnetic cylinder (26) in a region corresponding to said stationary attraction face (42), and an annular recess (44) having a flat portion (44a) flush connected to said stationary attraction face (42) is provided 20 in the inner surface of said non-magnetic cylinder (26) to form an annular chamber (45) between said annular recess (44) and an outer periphery of the rear portion of said movable core 25

(18).

[2] An electromagnetic fuel injection valve according to claim 1, wherein a center bore (46) having an inside diameter larger than an outside diameter of said stationary attraction face (42) is provided in an inner periphery of said non-magnetic cylinder (26) at a location in front of said annular recess (44); a guide bore (17) is provided in an inner periphery of said magnetic cylinder (9) and flush connected to said center bore (46); and a guide portion (47) is integrally provided on 10 said movable core (18) having at a rear end face thereof said movable attraction face (41) having an outside diameter substantially equal to that of said stationary attraction face (42) to overhang sideways from the outer periphery of said movable attraction face (41), so that said guide portion (47) is slidably 15 fitted in said guide bore (17).

[3] A process for producing an electromagnetic fuel injection valve according to claim 1, comprising a step of preparing a cylindrical magnetic cylinder blank (9') and a non-magnetic cylinder blank (26') for forming said magnetic cylinder (9) and said non-magnetic cylinder (26), respectively, as well as a stationary core blank (22') having a chamfer (48) around the outer periphery at a front end thereof for forming said stationary core (22); a step of fixing said stationary core blank (22') to said non-magnetic cylinder blank (26') in a state in which 20 a front portion of said stationary core blank (22') has been fitted so as to be in close contact with an inner surface of 25

an intermediate portion of said non-magnetic cylinder blank (26') coaxially coupled to said magnetic cylinder blank (9'); and a step of grinding the front portion of said stationary core blank (22') so as to remove said chamfer (48), thereby 5 forming a flat stationary attraction face (42), and subjecting inner peripheries of said non-magnetic cylinder blank (26') and said magnetic cylinder blank (9') to a grinding to form said annular recess (44), said center bore (46) and said guide bore (14), the above steps being carried out sequentially.